



Sheet 1 of 8

PTO-1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT	ATTY. DOCKET NO.	SERIAL NUMBER
	213.002-D1-US	10/646,313
	APPLICANT(S) Ye et al.	
FILING DATE	GROUP ART UNIT	
August 22, 2003	2878	

U.S. PATENT DOCUMENTS

EXAMINER INITIALS	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE
l	4,585,342	4/1986	Lin et al.	—	—	
l	4,701,606	10/1987	Tanimoto et al.	—	—	
l	4,929,083	5/1990	Brunner	—	—	
l	5,202,748	4/1993	MacDonald et al.	—	—	
l	5,481,624	1/1996	Kamon	—	—	
l	5,629,772	5/1997	Ausschnitt	—	—	
t	5,631,731	5/1997	Sogard	—	—	
l	5,795,688	8/1998	Burdorf et al.	—	—	
l	5,828,455	10/1998	Smith et al.	—	—	

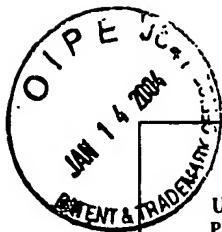
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l	EP 0 628 806	4/1994	European	—	—	

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l	"A New Mask Evaluation Tool, the Microlithography Simulation Microscope Aerial Image Measurement System", Budd, et al., SPIE Vol. 2197, 1994, pp.530-540
l	"Characterization of Lithographic System Performance Through Direct Aerial Image Measurements", C.H. Fields, SRC/SEMAECH, 1996 (96-MC-500)
l	"Aerial Image Measurements on a Commercial Stepper", Fields, et al., SPIE Vol. 2197, 1994, pp.585-595
l	"A Novel High-Resolution Large-Field Scan-and-Repeat Projection Lithography System", K. Jain, SPIE Vol. 1463 Optical/Laser Microlithography IV, 1991, pp.666-677
l	"Direct Aerial Image Measurements to Evaluate the Performance of an Extreme Ultraviolet Projection Lithography System", Fields, et al., J. Vac. Sci. Technol. B, Vol. 14, No. 6, Microelectronics and Nanometer Structures, Nov/Dec 1996, pp.4000-4003
l	"Direct Aerial Image Measurement as a Method of Testing High Numerical Aperture Microlithographic Lenses", Partlo et al., J. Vac. Sci. Technol. B, Vol. 11, No. 6, Nov/Dec 1993, pp.2686-2691

EXAMINER	Le	DATE CONSIDERED	4/04
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EXAMINER INITIALS	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE
1	5,888,675	3/1999	Moore et al.			
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1	5,969,639	10/1999	Lauf et al.			
1	5,978,085	11/1999	Smith et al.			
1	6,268,093	7/2001	Kenan et al.			
1	6,335,220	1/2002	Shioyama et al.			
1	6,356,345	3/2002	McArthur et al.			
1	2001/0055415	12/2001	Nozaki			
1	2002/0003216	1/2002	Kida et al.			

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1	"In Situ Measurement of an Image During Lithographic Exposure", Brunner et al., IEEE Electron Device Letters, Vol. EDL-6, No.7, July 1985, pp.329-331
1	"Improving Photomask Linewidth Measurement Accuracy via Emulated Stepper Aerial Image Measurement", J. Potzick, SPIE Vol. 2322, Photomask Technology and Management, 1994, pp.353-359
1	"Pattern Shape Analysis Tool for Quantitative Estimate of Photomask and Process", Yonekura, et al., Proceedings of SPIE Vol. 4409, Photomask and Next-Generation Lithography Mask Technology VIII, 2001, pp.204-211
1	"Meeting the Challenge of Advanced Lithography Reticle Inspection", Zurbrick et al., SPIE Vol. 2322, Photomask Technology and Management, 1994, pp.7-15
1	"In Situ Resolution and Overlay Measurement on a Stepper", Brunner et al., SPIE Vol. 565, Micron and Submicron Integrated Circuit Metrology, 1985, pp.6-13

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I	2002/0005947	1/2002	Golberg et al.			
I	2002/0036775	3/2002	Wolleschensky et al.			
I	2002/0041377	4/2002	Hagiwara et al.			
I	2002/0062206	5/2002	Liebchen			
A	2002/0067478	6/2002	Karpol et al.			
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I	"Application of the Aerial Image Measurement System (AIMS™) to the Analysis of Binary Mask Imaging and Resolution Enhancement Techniques", Martino et al., SPIE Vol. 2197, 1994, pp.573-584
I	"Optical Limitations to Cell Size Reduction in IT-CCD Image Sensors", Sato et al., IEEE, Transactions on Electron Devices, Vol. 44, No. 10, Oct. 1997, pp.1599-1603
I	"Direct Aerial Image Monitoring for Extreme Ultraviolet Lithography Systems", C.H. Fields, Ph.D. Dissertation Thesis, University of California, Berkeley, Spring 1997

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I	5,597,868	1/1997	Kunz			
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I	5,891,959	4/1999	Kunz			
I	5,973,316	10/1999	Ebbesen et al.			
I	6,002,740	12/1999	Cerrina et al.			
K	6,040,936	3/2000	Kim et al.			
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I	6,236,033	5/2001	Ebbesen et al.			
I	6,240,219	5/2001	Gregory			
I	6,278,101	8/2001	Puyot			
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I	6,362,907	3/2003	Stone et al.			
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1	2002/0105629	8/2002	Sandstrom et al.			
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1	2002/0134912	9/2002	Veneklasen et al.			
1	2002/0145717	10/2002	Baselmans et al.			
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	6,451,490	9/2002	Advocate et al.	—	—	
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	2002 0192598	12/2002	Hirayanagi	—	—	
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l	6,459,823	10/2002	Altunbasak et al.			

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l	"Control of Optical Transmission Through Metals Perforated with Subwavelength Hole Arrays", Kim et al., Optics Letters, Vol. 24, No. 4, Feb. 1999, pp.256-258
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l	"A General Simulator for VLSI Lithography and Etching Processes: Part I -- Application to Projection Lithography", Oldham et al., IEEE Transactions on Electron Devices, Vol. ED-26, No. 4, April 1979, pp.717-722
l	"High-Resolution Lithography with Projection Printing", H. Moritz, IEEE Transactions on Electron Devices, Vol. ED-26, No. 4, April 1979, pp.705-710
l	"Contrast Studies in High-Performance Projection Optics", Oldham et al., IEEE Transactions on Electron Devices, Vol. ED-30, No. 11, Nov. 1983, pp.1474-1479
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l	"Near-Field Optics: Microscopy, Spectroscopy, and Surface Modification Beyond the Diffraction Limit", Betzig and Trautman, Science, Vol. 257, July 1992, pp.189-195
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l	"Moire Technique for Overlay Metrology", Brunner and Smith, SPIE Integrated Circuit Metrology II, Vol. 480, 1984, pp.164-170
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l	"Super-Resolved Surface Reconstruction From Multiple Images", Cheeseman et al., Technical Report FIA-94-12, NASA Ames Research Center, Dec. 1994
l	"Monolithic Detector Array Comprised of >1000 Aerial Image Sensing Elements", Kunz et al., To be published in the SPIE Proceeding of the Microlithography, 2003

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l	"Autonomous On-Wafer Sensors for Process Modeling, Diagnosis, and Control", Freed et al., IEEE Transactions on Semiconductor Manufacturing, Vol. 14, No. 3, Aug. 2001, pp.255-264
l	"Smart Dummy Wafers", Freed and Fisher, University of California, Berkeley, Presentation, May 1998
l	"A Multi-Blanker for Parallel Electron Beam Lithography", G. Winograd, Ph.D. Dissertation, Stanford University, May, 2001
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